

# PlantSEED Workshop Outline

## August 13-14

Presentations

Hands-on

### Day 1: Annotation and Reconstruction

#### Session A: Overview and Login (9am):

- A. **Introductions and General overview**  
(30 minutes)
- B. **Introduction to ModelSEED/PlantSEED website (trouble-shooting)**  
(15-30 minutes)

#### Coffee Break (10am)

#### Session B: Automated Annotation (10:30am):

- A. **Explanation of RAST, Subsystems, and PlantSEED K-mers**  
(40 minutes)
- B. **Explore annotation in PlantSEED and in user genomes**  
(50 minutes)

#### Lunch (12pm)

#### Session C: Editing functional annotation (1pm):

- A. **Explanation of false positives and false negatives in annotation process**  
(30 minutes)
- B. **Finding and fixing false positives and false negatives**  
(60 minutes)

#### Break (2:30pm)

#### Session D: Metabolic Reconstruction (3pm):

- A. **Overview of metabolic reconstruction process**  
(30 minutes)
- B. **Iterative reconstruction of draft metabolic models**  
(60 minutes)

#### Finish (4pm)

## **Day 2: Metabolic Modeling**

### Session E: Overview and Q&A:

- A. Re-visit Annotation/Reconstruction process, answer questions, debug  
(30 minutes)
- B. Introduction to metabolic modeling  
(30 minutes)
- C. Exploring aspects of metabolic model & biomass. Gapfill models  
(30 minutes)

### Coffee Break (10:30am; Gapfilling)

### Session F: Flux Balance Analysis and Gapfilling (11am):

- A. Explanation of FBA and Gapfilling  
(30 minutes)
- B. Running and Exploring FBA results  
(30 minutes)

### Lunch (12pm)

### Session G: Future of PlantSEED (1pm):

- A. Future plans  
(30 minutes)
- B. Hands on exploration of genomes, metabolic models, and Q&A  
(90 minutes)

### Finish (3:00pm)